STATEMENT OF THE LEGAL AND FACTUAL BASIS FOR THE TERMS OF THE PROPOSED PERMIT
[MDAQMD Rule 1203(B)(1)(a)(i)]

TITLE V FEDERAL PERMIT TO OPERATE
Facility named – Aerochem, Inc.,

Federal Operating Permit # 005400246

Issue Date: March 17, 2004

Processing Engineer:

William Weese
Air Quality Engineer

FACILITY IDENTIFYING INFORMATION:

Owner/Company Name:	AEROCHEM, INC.
Owner Mailing Address:	AEROCHEM, INC. 4001 El Mirage Road Adelanto, CA 92301
Facility Names:	AEROCHEM, INC.
Facility Location:	4001 El Mirage Road Adelanto, CA 92301
Mailing Address:	AEROCHEM, INC. 4001 El Mirage Road Adelanto, CA 92301
MDAQMD Federal Operating Permit Number:	005400246
MDAQMD Company Number:	0054
MDAQMD Facility Number:	00246
Responsible Official: Title:	A.M. McFarlan Vice President, Operations AEROCHEM, INC.
Phone Number:	760-246-4191, ext. 4102
Facility "Site" Contacts: Phone/Fax/Email:	Mr. Kent Christensen Sr. Environmental Engineer 760-246-4191, ext. 4111 FAX (760) 388-4221 kent.christensen@aerocheminc.com
Facility "Off Site" Contacts: Phone Number:	none
Nature of Business: SIC Code: Facility Location:	Aerospace Chemical Milling Facility 3728 Aircraft part and auxiliary equipment, n.e.c. UTM (Km) 447E / 3828N

STATEMENT OF THE LEGAL AND FACTUAL BASIS FOR THE TERMS OF THE PROPOSED PERMIT **[1203(B)(1)(a)(i)]**

Statutory and Regulatory Authorities: Pursuant MDAQMD Regulation 12, Program - Federal Operating Permits, a.k.a. Title V (Adopted 7/25/94, Amended 02/22/95, Additional Rules adopted 06/28/95, 7/31/95) and 02/05/96 FR 4217, in accordance with Rule 221 - *Federal Operating Permit Requirement*, 40 CFR 52.220(c)(216)(i)(A)(2) - 02/05/96 61 FR 4217 of the Clean Air Act of 1990, the Mojave Desert Air Quality Management District issues this permit.

Federal Operating Permit (FOP number: 005400246) for AEROCHEM, INC., 4001 El Mirage Road, Adelanto, CA 92301. Aerochem, is an Aerospace Chemical Milling Facility, SIC Code: 3728 - Aircraft part and auxiliary equipment.

The AEROCHEM, INC, Title V Federal Operating Permit was developed by consulting District Permit conditions for existing equipment, SIP Rules and NSPS requirements for Federal Rules, applicable to the facility. MDAQMD Title V Program Rules were also consulted.

I. FACILITY & PROCESS DESCRIPTION:

Aerochem, Inc. chemically mills aerospace components. Caustic soda, sodium sulfide, hydrofluoric acid, nitric acid, hydrochloric acid, and phosphoric acid are used to shape aluminum, titanium and steel within extremely narrow tolerance limits. The milling process consists generally of six sequential operations: cleaning, masking, scribing, etching, stripping, and benching.

The process sequence begins by cleaning the parts with solvent solution. The specific solvent choice depends on the type of surface contamination. Next, the parts to be milled are covered with a Maskant (i.e., a corrosion-resistant cover coat). This is accomplished either by spraying the parts with Maskant, or by placing the parts in a dip tank containing the Maskant. A pattern is then scribed onto the masked parts using a template and knife. After scribing the pattern, the scribed portion of the Maskant is peeled off to expose the areas that are to be etched. Once this is done, the parts are immersed in an etching solution for a predetermined length of time. After each etching operation, parts are rinsed thoroughly with tap water. The remaining Maskant then is stripped off the parts by hand. Any benching operations, including the smoothing of uneven edges, blending of welds, removal of areas of insufficient etching, etc., are completed at this time. Finally, the parts are inspected and prepared for shipment. *(Appendix "A" contains General Provisions Applicability to Subpart GG, i.e. Aerospace NESHAP requirements)*

II. BACKGROUND:

The Federal Clean Air Act Amendments of 1990 established a nation-wide permit to operate program commonly known as "Title V". MDAQMD adopted Regulation XII [Rules 1200 - 1210] and Rule 221 - *Federal Operating Permit Requirement*; [Version in SIP = Current, 40 CFR 52.220(c)(216)(i)(A)(2) - 02/05/96 61 FR 4217], to implement the Federal Operating Permit, and received Interim Program Approval from EPA on March 6, 1996.

This *Statement of Legal and Factual Basis,* pursuant to Rule 1203(B)(1)(a)(i), is intended to assess the adequacy of this Title V Application and to explain the District's basis in composing the Title V - Federal Operating Permit. The Title V Federal Operating Permit application received before March 6, 1997 met the Part 70 application deadline for MDAQMD facilities. [NOTE: all MDAQMD facilities subject to Title V were required to submit Title V applications by March 6, 1997].

The facilities Title V Permit Application was reviewed and subsequently determined complete.

The District's approach to the Title V program is to issue a single Federal Operating Permit for the entire facility that satisfies the federal requirement for a permit under Rule 221 [*NOTE: MDAQMD maintains separate Title V and District permits programs*]. All Federal, State and most District only requirements, associated with the emission of air contaminants, are included in the Federal Operating Permit. All documents, which are not readily available to the public, and are necessary to support the permit, are to be included. The District has taken the approach that the following documents are readily available to the public, and therefore, are not included: Code *of Federal Regulations, California Code of Regulations and Health and Safety Code, District Rules and Regulations [both documents are current and appear in the California State Implementation Plan], the continuous emission monitoring system quality assurance and monitoring plans [available at the facility or the District's office], all test methods, copies of District Authorities to Construct and Permits to Operate [available at the District's office]*.

The USEPA, Region 9 was e-mailed a draft of the proposed permit on January 9, 2004 [a hard copy was mailed January 9, 2004]. The USEPA statutory 45-day review period will expire on or about March 11, 2004. The 30-day Public Notice will be published on January 27, 2004 and end on February 25, 2004.

The District will review and consider all public and EPA comments and modify this "Statement of Basis" document and Title 5 Permit to address agreed to concerns before the proposed Title V Permit is issued.

Rule 1203 (D)(1) outlines Title V Permit content requirements as follows:

III. TITLE V PERMIT CONTENTS [Rule 1203 (D)(1)]:

All Federal Operating Permits shall contain, at a minimum, the following terms, and conditions:

A. Identification of Applicable Requirements:

1. Standard conditions for generally applicable requirements do not list those processes to which they apply as allowed by EPA's White Paper One, page 11, section 4, last sentence of paragraph 2.

2. Minor New Source Review (NSR). All existing permit conditions, which are based on previous authority to construct conditions, are considered applicable federal requirements because those pre-construction review actions resulted from SIP Rule 203 - *Permit to Operate* and SIP Rule 204 - *Permit Conditions*.

3. Federal Applicable/Enforceable Requirements:

District Rule 1201 (P): "Federally Enforceable" - Any requirement, condition or other term which is fully enforceable by USEPA pursuant to the provisions of 42 U.S.C. §7413 (Federal Clean Air Act §113) or the public pursuant to the provisions of 42 U.S.C. §7604 (Federal Clean Air Act §304).

District Rule 1201 (G): "Applicable Requirement" - Any of the following requirements, including requirements that have been promulgated or approved by USEPA through rulemaking at the time of permit issuance but have future effective dates, as they apply to a Facility or Permit Unit: ***Appropriate conditions are included in the Title V Permit to ensure compliance with the following requirements (a through i).***

(a) Any standard or other requirement contained in the applicable implementation plan for the District, and any amendments thereto, approved or promulgated pursuant to the provisions of Title I of the Federal Clean Air Act (42 U.S.C. §§7401-7515).

(b) Any term or condition of any preconstruction permit issued pursuant to regulations approved or promulgated under Title I of the Federal Clean Air Act (42 U.S.C. §§7401-7515).

(c) Any standard or other requirement under 42 U.S.C. §§7411, Standards of Performance for New Stationary Sources (Federal Clean Air Act §111); 42 U.S.C. §7412, Hazardous Air Pollutants (Federal Clean Air Act §112); and any regulations promulgated thereunder.

(d) Any standard or other requirement under Title IV of the Federal Clean Air Act (42 U.S.C. §§7651-7651o) or the regulations promulgated thereunder.

(e) Any requirements regarding monitoring, analysis, and compliance established pursuant to 42 U.S.C. §7414(a)(3), Record keeping, Inspections, Monitoring and Entry (Federal Clean Air Act §114); 42 U.S.C. §7661c(b), Permit Requirements and Conditions (Federal Clean Air Act §504); and the regulations promulgated thereunder.

(f) Any standard or other requirement governing Solid Waste Incineration Units under 42 U.S.C. §7429, Solid Waste Combustion (Federal Clean Air Act §129) and the regulations promulgated thereunder.

(g) Any standard or other requirement for consumer or commercial products under 42 U.S.C. §7511b(e) (Federal Clean Air Act §183) and the regulations promulgated thereunder.

(h) Any standard or other requirement of the regulations promulgated under Title VI of the Federal Clean Air Act (42 U.S.C. §§7671-7671q) unless the USEPA has determined that such requirement need not be contained in a Federal Operating Permit.

(i) Any national ambient air quality standard or increment or visibility requirement under part C of Title I of the Federal Clean Air Act (42 U.S.C. §§7401-7515), but only as it would apply to temporary sources pursuant to the provisions of 42 U.S.C. 7661c(e) (Federal Clean Air Act §504(e).

4. See the following discussions below:

40 CFR Part 61, Subpart M - National Emission Standard for Asbestos
This facility on an as needed basis is subject to Section 61.145 through 61.147 - standards for the demolition and renovation of asbestos. Historically, the facility has been in compliance with the requirements of these standards. ***Appropriate conditions are included in the Title V Permit to ensure compliance with these requirements.***

40 CFR Part 82 - Protection of Stratospheric Ozone
This facility is in compliance with the requirements of this part. Any servicing of air conditioners is performed by a qualified contracting company. ***Appropriate conditions are included in the Title V Permit to ensure compliance with these requirements.***

40 CFR, Parts 60.7, 60.8 and 60.13; Subpart A - New Source Performance Standards, General Provisions
Facility processes & equipment are not subject to the requirements of this part. Facility is subject to MDAQMD Rule 1118 Requirements & Aerospace MACT requirements (Appendix "A" contains General Provisions Applicability to Subpart GG, i.e. Aerospace NESHAP requirements)

C. Emissions limitations and/or standards, including operational limitations, which assure compliance with all Applicable Requirements and a reference to the origin and authority of each term or condition contained in the Federal Operating Permit: ***Completed, Processes and Control Equipment Requiring Emission and Operational Limitations are stated in the Title V Permit conditions.***

D. Monitoring requirements including but not limited to: [40 CFR 70.6(a)(1)] [see following] ***Completed, Processes and Control Equipment Requiring Monitoring and Recordkeeping are stated in permit conditions. Records for 5 years stated in Title V Permit conditions.***

(i) All emissions monitoring and analysis methods required by an Applicable Requirement.
(ii) Periodic monitoring, testing or record keeping (including test methods sufficient to yield reliable data) to determine compliance with an Applicable Requirement that does not directly require such monitoring.
(iii) Necessary requirements concerning use and maintenance of equipment including the installation and maintenance of monitoring equipment.

Other - Facility Support Equipment
Any underground gasoline tanks are given a PTO pursuant to District Rule 461. No NSPS, NESHAPS or MACT apply to underground gasoline storage at this facility. ***Completed, no underground gasoline tanks at this facility.***

E. Record keeping requirements, where applicable, including but not limited to: [see following] ***Processes and Control Equipment Requiring Monitoring and Recordkeeping are stated in Title V Permit conditions. Records for 5 years stated in Title V Permit conditions.***

(i) Records of required monitoring information including dates and times of sampling, operating conditions at the time of sampling, date of analysis, analytical techniques and methods, the person or company performing the analysis, and the results of the analysis.

(ii) The retention of all records for a period of at least five (5) years from the date of monitoring.

F. Reporting requirements, where applicable, including but not limited to: [see following] ***COMPLETED, requirements (i through ii) are in proposed Title V Permit.***

(i) Submittal of any required monitoring reports at least every six (6) months.

(ii) Prompt reporting of all deviations from permit requirements including those attributable to breakdown conditions. Prompt reporting shall be determined in compliance with District Rule 430.

G. Various Standardized Provisions and/or Conditions: [see following] ***COMPLETED, requirements (i through xii) are in proposed Title V Permit.***

(i) A severability clause.

(ii) A provision, which states that the permit holder shall comply with all conditions of the Federal Operating Permit. Any noncompliance constitutes a violation of the Federal Clean Air Act and is grounds for enforcement action; the termination, revocation and reissuance, or modification of the Federal Operating Permit; and/or grounds for denial of a renewal application.

(iii) A provision which states that the need to halt or reduce activity to maintain compliance with the provisions of the Federal Operating Permit, or for any other reason, is not a defense in an enforcement action.

(iv) A provisions, which states that the Federal Operating Permit may be modified, revoked, reopened, reissued or terminated for cause.

(v) A provision which states that the filing of an application for modification; a request for revocation and re-issuance, or termination; or notifications of planned changes, or anticipated noncompliance does not stay any condition of the Federal Operating Permit.

(vi) A provision which states that the permit does not convey any property rights of any sort, or any exclusive privilege.

(vii) A provision which states that the Permit holder shall furnish to the District, within a reasonable time as specified by the District, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, terminating or determining compliance with the Federal Operating Permit.

(viii) A provision which states that the Permit holder shall, upon request, furnish to the District copies of records required to be kept pursuant to conditions of the Federal Operating Permit.
(ix) A provision requiring the payment of annual permit renewal fees and other applicable fees as prescribed in District Rule 312.
(x) A provision stating that no permit revision shall be required under any approved economic incentives, marketable permits, emissions trading or other similar programs provided for in the permit.
(xi) Terms and conditions, if applicable, for reasonably anticipated operating scenarios identified by the Facility in its application which require the Facility, contemporaneously with making the change from one operating scenario to another, to record in a log at the Facility a record of the scenario under which it is operating; and ensure that each alternative operating scenario meets all Applicable Requirements.
(xii) Terms and conditions, if requested by the applicant, for the trading of emissions increases and decreases within the Facility to the extent any Applicable Requirements allow for such trading without case-by-case approval. Such terms conditions shall include all terms and conditions to determine compliance with all Applicable Requirements; and meet all Applicable Requirements.

H. Compliance Conditions: [see following] ***COMPLETED, requirements (i through x) are in proposed Title V Permit.***
(i) Inspection and entry requirements which require that the Permit Holder allow an authorized representative of the District to enter upon the Permit holder's premises, at reasonable times.
(ii) Provisions which allow an authorized representative of the District to have access to and copy any records that must be kept under conditions of the Federal Operating Permit.
(iii) Provisions which allow an authorized representative of the District to inspect any Permit Unit, equipment, practice, or operation regulated or required under the Federal Operating Permit.
(iv) Provisions which allow an authorized representative of the District to sample or monitor substances or parameters for the purpose of assuring compliance with the Federal Operating Permits or with any Applicable Requirement.
(v) A Compliance Plan.
(vi) A restatement, if applicable, of the requirement that the Permit holder submit progress reports at least semiannually pursuant to a schedule of compliance. Such progress reports shall comply with the provisions of District Rule 1201(I)(3)(iii).
(vii) Certification requirements including the frequency of submission, not less than annually, for Compliance Certifications.
(viii) Requirements that method for monitoring compliance be included in the Compliance Certifications.
(ix) Requirements that all Compliance Certifications be contemporaneously submitted to USEPA.

(x) Any additional certification requirements as specified in 42 U.S.C §7414(a)(3), Recordkeeping Inspections Monitoring and Entry (Federal Clean Air Act §114(a)(3)) and 42 U.S.C. §7661c(b), Permit Requirements and Conditions (Federal Clean Air Act §503(b)) or in regulations promulgated thereunder.

I. Fugitive Emissions: ***COMPLETED, control equipment and requirements are addressed in proposed Title V Permit.***

(i) Fugitive emissions shall be included in the permit and permit conditions in the same manner as stack emissions.

IV. CONCLUSIONS AND RECOMMENDATION:

In conclusion, the proposed **Aerochem - Title V Permit** has been found to satisfy all of the requirements of District Rule 221, Rule 312, Regulation XII Rules, and the District's Title V Permit Program requirements.

Therefore, it is recommended that this Title V - Federal Operating Permit be issued to satisfy these requirements on March 17, 2004.

APPENDIX "A"

General Provisions Applicability to Subpart GG

(Final amendments to the NESHAP as of March 27, 1998)

1. *General Provisions Applicability to Subpart GG. [63.743(a)] Table 1 -- shows how aerospace sources are affected by the General Provisions of 40 CFR part 63, subpart A.*
2. *Requirement to submit a startup, shutdown, and malfunction plan, except for dry particulate filter systems operated per manufacturer's instructions. [63.743(b)]*
3. Requirement to obtain approval to use control device or equipment not listed in the regulation. [63.743(c)]
4. Wastes subject to RCRA are exempt. [63.741(e)]
5. *Space vehicles are exempt from the requirements, except for depainting operations. [63.741(h)]*.
6. *Rework operations performed on antique aerospace vehicles or components are exempt. [63.741(j)]*.

Test Methods and Procedures
See individual requirements. Also, comply with §63.7 of the General Provisions. [63.749 & 63.750]
Monitoring Requirements
See individual requirements. Also, comply with §63.8(f) and (g) of the General Provisions. [63.751(e) and (f)]
Recordkeeping Requirements
See individual requirements. Also, comply with certain parts of §63.10 of the General Provisions. [63.752(a)]
Reporting Requirements
1. See individual requirements. Also, comply with certain parts of §63.9 and §63.10 of the General Provisions.
2. State approved operating permit application can be used for initial notification if submitted by September 1, 1997. [63.753(a)(2)]

Cleaning Operations

Housekeeping Measures:
1. Must comply with the following requirements unless the *cleaning* solvent used is *identified in Table 1 of §63.744 or contains HAP and VOC below the de minimis levels specified in §63.741(f)*. [63.744(a)]
2. Place *cleaning* solvent-laden cloth, paper, or other absorbent applicators in bags or other closed containers *upon completing their use*. [63.744(a)(1)]
3. Store cleaning solvents *(except semi-aqueous)* in closed containers. [63.744(a)(2)]

Handwipe:
1. Except for cleaning of spray gun equipment, all hand-wipe cleaning solvents must meet a composition requirement *(see Table 1 of § 63.744)*, have a composite vapor pressure #45 mm Hg at 20°C, or meet the 60 % volume reduction requirements specified in an alternative compliance plan. [63.744(b)]
2. Note the list of *13* cleaning operations exempt from composition, vapor pressure, and volume reduction requirements. [63.744(e)]

Spray gun cleaning:
1. Use one of four specified techniques or their equivalent. [63.744(c)]
2. For enclosed spray gun cleaners, if leaks are found during the required monthly inspection, repair as soon as practicable, but within 15 days. [63.744(c)(1)(ii)]
3. If cleaning solvent solutions that contain HAP and VOC below the de minimis levels are used, those cleaning operations using such solutions are exempt from requirements. [63.744(c)]

Flush cleaning:
Operating procedures specify emptying used cleaning solvent into enclosed container, collection system, or system with equivalent emission control. [63.744(d)]

Performance Test Periods and Tests:
N/A

Test Methods And Procedures:
Handwipe
1. Composition determination using manufacturer's data. [63.750(a)]
2. Vapor pressure determination using readily available sources such as MSDS if single component; composite vapor pressure determined by manufacturer's supplied data or ASTM E 260-91 and by equation provided for multiple component solvents. [63.750(b)]
Spray gun cleaning
None.
Flush cleaning
None.

Monitoring:
Handwipe
None
Spray gun cleaning Flush cleaning
Monthly visual leak inspection [63.751(a)]
None

Recordkeeping:
Handwipe
1. If complying with composition requirements, the name, data/calculations, and annual volumes. [63.752(b)(2)]
2. If complying with vapor pressure limit, the name, vapor pressure, data/calculations/test results, and monthly volumes. [63.752(b)(3)]
3. For noncompliant cleaning solvents used in exempt operations, the name, monthly volumes by operation, and master list of processes. [63.752(b)(4)]
Spray gun cleaning
Record all leaks, including source identification and dates leaks found and repaired. [63.752(b)(5)]
Flush cleaning
For semi-aqueous cleaning solvents, the name, data/calculations, and annual volumes. [63.752(b)(2)]

Reporting:
All applicable cleaning operations
Semiannual report: Statement certifying compliance. [63.753(b)(1)(v)]
Handwipe–Semiannual (6 months from the date of notification of compliance status)
1. Noncompliant cleaning solvent used. [63.753(b)(1)(i)]
2. New cleaning solvents and their composite vapor pressure or notification of compliance with composition requirements. [63.753(b)(1)(ii)]
Spray gun cleaning--Semiannual (6 months from the date of notification of compliance status)
1. Noncompliant spray gun cleaning method used. [63.753(b)(1)(iii)]
2. Leaks from enclosed spray gun cleaners not repaired within 15 days. [63.753(b)(1)(iv)]
Shaded areas with bold italics indicate final amendments to the NESHAP as of March 27, 1998

Primer and Topcoat Application Operations

Standards:

Uncontrolled Primers

1. Organic HAP and VOC content limit: 350 grams per liter (g/L) (2.9 lb/gal less water for HAP; and less water and exempt solvents for VOC) as applied. [63.745(c)(1)-(2)]
2. Achieve compliance through: (1) using coatings below content limits, or (2) using monthly volume-weighted averaging (primers only) to meet content limits. [63.745(e)]

Uncontrolled Topcoats *(including self-priming topcoats)*

3. Organic HAP and VOC content limit: 420 g/L (3.5 lb/gal less water for HAP; and less water and exempt solvents for VOC) as applied. [63.745(c)(3)-(4)]
4. Same as No. 2 (above) except for topcoats only.

Controlled Primers and Topcoats *(including self-priming topcoats)*

5. Control system must reduce organic HAP and VOC emissions to the atmosphere $81%, using capture and destruction/removal efficiencies. [63.745(d)]

All Primers and Topcoats

6. Minimize spills during handling and transfer. [63.745(b)]
7. Specific application techniques must be used. [63.745(f)(1)]
8. Exemptions from No. 7 (above) provided for certain situations. [63.745(f)(3)]
9. All application equipment must be operated according to manufacturer's specifications, company procedures, or locally specified operating procedures (whichever is most stringent). [63.745(f)(2)]
10. Operating requirements for the application of primers or topcoats that contain inorganic HAP, including control with either particulate filters *(see Tables 1 through 4 of § 63.745)* or waterwash system. Painting operation(s) must be shutdown if operated outside manufacturer's specified limits. [63.745(g)(1) through (3)]
11. Exemptions from No. 10 (above) provided for certain application operations. [63.745(g)(4)]

Performance Test Periods and Tests:

Uncontrolled

1. Performance Test Period for coatings not averaged: each 24 hour period; for "averaged" coatings: each 30-day period. [63.749(d)(1)]

Controlled

2. Performance Test Period for noncarbon adsorber: three 1-hour runs; for carbon adsorber: each rolling material balance period. [63.749(d)(1)]
3. Initial performance test required for all control devices to demonstrate compliance with overall control efficiency requirement. [63.749(d)(2)]

Test Methods and Procedures:

Organic HAP

1. Organic HAP level determination procedures. [63.750(c) and (d)]
2. VOC level determination procedures. [63.750(e) and (f)]
3. Overall control efficiency of carbon adsorber system determined using provided procedures; for other control devices, determine capture efficiency and destruction efficiency. For capture efficiency, use Procedure T in Appendix B to 40 CFR 52.741 for total enclosures and 40 CFR

52.741(a)(4)(iii) procedures for all other enclosures. [63.750(g) and (h)]
4. For alternative application methods, first determine emission levels for initial 30-day period or five aircraft using only HVLP or electrostatic, or a time period specified by the permitting agency. Then use alternative application method for period of time necessary to coat equivalent amount of parts with same coatings. Alternative application method may be used when emissions generated during the test period are less than or equal to the emissions generated during the initial 30-day period or five aircraft. Dried film thickness must be within specification for initial 30-day period or five aircraft as demonstrated under actual production conditions. [63.750(i)]

Inorganic HAP
5. *Dry particulate filter certification: use Method 319 to meet or exceed the efficiency data points in Tables 1 and 2 of § 63.745 for existing sources, or Tables 3 and 4 of § 63.745 for new sources [63.750(o)]*

Monitoring:
1. Carbon adsorbers. [63.751(b)(1) through (7)]
2. Temperature monitoring equipment to be installed, calibrated, maintained, and operated - according to manufacturer's specifications. Use CEMS as an alternative. [63.751(b)(8)]
3. Incinerators. [63.751(b)(9) through (12)]
4. Dry particulate filters and waterwash systems. [63.751(c)]
5. Alternate monitoring method. [63.751(e)]

Recordkeeping:
1. Name and VOC content as received and as applied for all primers and topcoats. [63.752(c)(1)]
Uncontrolled
2. For "compliant" coatings, organic HAP and VOC contents as applied, data/calculations and test results used to determine HAP/VOC contents (H_i and G_i), and monthly usage. [63.752(c)(2)]
3. For "low-HAP content" primers, annual purchase records, and data/calculations and test results used to determine H_i or HAP/VOC content as applied. [63.752(c)(3)]
4. For "averaged" coatings, monthly volume-weighted average values of HAP/VOC content (H_a and G_a), and data/calculations and test results used to calculate H_a and G_a. [63.752(c)(4)]
Controlled
5. For incinerators, overall control efficiency test results/data/calculations used in determining the overall control efficiency; and continuous records of incinerator temperature(s). [63.752(c)(5)]
6. For carbon adsorbers, overall control efficiency and length of rolling period and all supporting test results/data/calculations used in determining the overall control efficiency. [63.752(c)(6)]
Inorganic HAP Particulate
7. Pressure drop across filter or water flow rate through waterwash system once per shift, and acceptable limits. [63.752(d)(1) through (3)]

Reporting:
Semiannual (6 months from the date of notification of compliance status)
1. All instances where organic HAP/VOC limits were exceeded. [63.753(c)(1)(i) and (ii)]
2. Control device exceedances (out-of-compliance). [63.753(c)(1)(iii), (iv), and (v)]
3. Periods when operation not immediately shut down when the pressure drop or water flow rate was outside limits. [63.753(c)(1)(vi)]
4. Statement certifying compliance. [63.753(c)(1)(vii)]
Annual (12 months from the date of notification of compliance status)
5. Number of times the pressure drop or water flow rate limits were exceeded. [63.753(c)(2)]

Depainting Operations

Requirements:

Exemptions

1. Facilities depainting 6 or less completed aerospace vehicles per calendar year. [63.746(a)]
2. Depainting of parts or units normally removed from the plane for depainting (except wings and stabilizers). [63.746(a)(1)]
3. Aerospace vehicles or components intended for public display, no longer operational, and not easily capable of being moved. [63.746(a)(2)]
4. Depainting of radomes and parts, subassemblies, and assemblies normally removed from the primary aircraft before depainting. [63.746(a)(3)]

Standards:

1. Zero organic HAP emissions from chemical strippers or softeners. [63.746(b)(1)]
2. Minimize inorganic HAP emissions when equipment malfunctions. [63.746(b)(2)]
3. Facility (average) allowance for spot stripping and decal removal: 26 gallons of strippers *or 190 pounds of HAP* per commercial aircraft per year; and 50 gallons of strippers *or 365 pounds of HAP* per military aircraft per year. [63.746(b)(3)]
4. Follow operating requirements for depainting operations generating airborne inorganic HAP. [63.746(b)(4)]
5. Mechanical and hand sanding are exempt from requirements of §63.746(b)(4). [63.746(b)(5)]
6. Control HAP emissions at 81% efficiency for systems installed before effective date (September 1, 1995), and 95% efficiency for newer systems. [63.746(c)]

Performance Test Periods and Tests:

Organic HAP

1. Initial performance test of all control devices is required to demonstrate compliance with overall control efficiency requirement. [63.749(f)(1), (f)(2), and (f)(3)]
2. Performance Test Period for noncarbon adsorber, three 1-hour test runs; for carbon adsorber, each rolling material balance period. [63.749(f)(1)]
3. Test period for spot stripping and decal removal usage limits: each calendar year. [63.749(f)(1)]

Inorganic HAP

4. Operating requirements specified in § 63.746(b)(4). [63.749(g)]

Test Methods and Procedures:

Organic HAP

1. Overall control efficiency of carbon adsorber system may be determined using specified procedures and equations 9 through 14; for other control devices, must determine capture and destruction efficiencies (use equations 15 through 18 to calculate overall control efficiency). For capture efficiency, use Procedure T in Appendix B to 40 CFR 52.741 for total enclosures and 40 CFR 52.741(a)(4)(iii) procedures for all other enclosures. [63.750(g) and (h)]
2. Spot stripping and decal removal: Procedures are provided for determining volume of chemical strippers (equation 20) *or weight of organic HAP used per aircraft (equation 21)*. [63.750(j)]

Inorganic HAP

3. *Dry particulate filter certification: use Method 319 to meet or exceed the efficiency data points in Tables 1 and 2 of § 63.745 for existing sources or Tables 3 and 4 of § 63.745 for*

new sources. [63.750(o)]

Monitoring:
Continuously monitor the pressure drop across filters, or the water flow rate through the waterwash system *and read and record the pressure drop, or the water flow rate for waterwash system, once per shift.* [63.751(d)]

Recordkeeping:
1. Name and monthly volumes of each chemical stripper used *or monthly weight of organic HAP used in chemical strippers.* [63.752(e)(1)]
2. For controlled chemical strippers (carbon adsorber), overall control efficiency and length of rolling period and all supporting test results/data/calculations; certification of the accuracy of the device. [63.752(e)(2)]
3. For controlled chemical strippers (other control devices), overall control efficiency and supporting test results/data/calculations. [63.752(e)(3)]
4. List of parts/assemblies normally removed. [63.752(e)(4)]
5. For nonchemical based equipment, name and type, and malfunction information including dates, description, and alternative methods used. [63.752(e)(5)]
6. For spot stripping and decal removal, volume of stripper *or weight of organic HAP used,* annual number of aircraft stripped, annual average volume *or weight* per aircraft, and all data/calculations used to calculate volume *or weight* per aircraft. [63.752(e)(6)]
7. Pressure drop across filter or the visual continuity of the water curtain and water flow rate for waterwash systems, once per shift and include acceptable limits. [63.752(e)(7)]

Reporting:
Semiannual (6 months from the date of notification of compliance status)
1. 24-hour periods where organic HAP were emitted from depainting operations. [63.753(d)(1)(i)]
2. New/reformulated chemical strippers and HAP contents. [63.753(d)(1)(ii), (iii), and (iv)]
3. New nonchemical depainting techniques. [63.753(d)(1)(v)]
4. Malfunction information on nonchemical depainting techniques including dates, description, and alternative methods used. [63.753(d)(1)(vi)]
5. Periods when operation not immediately shut down when the pressure drop or water flow rate was outside limits. [63.753(d)(1)(vii)]
6. List of new/discontinued aircraft models and, for new models, list of parts normally removed for depainting. [63.753(d)(1)(viii)]
7. Organic HAP control device exceedances. [63.753(d)(3)]
8. Statement certifying compliance. [63.753(d)(1)(ix)]

Annual (12 months from the date of notification of compliance status)
9. Exceedances of average annual volume or weight allowance for spot stripping and decal removal. [63.753(d)(2)(i)]
10. Number of times the pressure drop or water flow rate limits were exceeded. [63.753(d)(2)(ii)]
Shaded areas with bold italics indicate final amendments to the NESHAP as of March 27, 1998.

Maskant Operations

Requirements:

Standards:
Minimize spills during handling and transfer. [63.747(b)]
Uncontrolled Maskants.
1. Organic HAP emissions: #*622 g/l (5.2 lb/gal) (less water) as applied for Type I*; # 160 g/L (1.3 lb/gal) (less water) as applied for Type II. [63.747(c)(1)]

2. VOC emissions: *#622 g/l (5.2 lb/gal) (less water and exempt solvents) as applied for Type I*, #160 g/L (1.3 lb/gal) (less water and exempt solvents) as applied for Type II. [63.747(c)(2)]
3. Exemption for touch-up of scratched surfaces, damaged maskant, and trimmed edges. [63.747(c)(3)]
4. Comply by either: (1) using maskants below content limits, or (2) using monthly volumeweighted averaging provisions described in §63.743(d). [63.747(e)]
Controlled Maskants
5. If control device is used, system must capture and control all emissions from maskant operation and must achieve an overall control efficiency of at least 81%. [63.747(d)]

Performance Test Periods and Tests:

Uncontrolled
1. Performance Test Period for maskants that are not averaged, each 24-hour period; for maskants that are averaged, each 30-day period (unless otherwise specified). [63.749(h)(1)]

Controlled
2. Performance Test Period for noncarbon adsorber, three 1-hour test runs; for carbon adsorber, each rolling material balance period. [63.749(h)(1)]
3. Initial performance test required for all control devices to demonstrate compliance with overall control efficiency requirement. [63.749(h)(2)]

Test Methods and Procedures:

1. Organic HAP level determination procedures. [63.750(k) and (l)]
2. VOC level determination procedures. [63.750(m) and (n)]
3. Overall control efficiency of carbon adsorber system determined using specified procedures and equations 9 through 14; for other control devices, determine capture and destruction efficiencies (use equations 15 through 18 to calculate overall control efficiency). For capture efficiency, use Procedure T in Appendix B to 40 CFR 52.741 for total enclosures and 40 CFR 52.741(a)(4)(iii) procedures for all other enclosures. [63.750(g) and (h)]

Monitoring:

1. Incinerators and carbon adsorbers: temperature sensors with continuous recorders for incinerators; and install, calibrate, maintain, and operate temperature monitors according to manufacturer's specifications. Use CEMS as an alternative. [63.751(b)]

Recordkeeping:

Uncontrolled Maskants
1. For maskants not averaged, mass of organic HAP and VOC emitted per unit volume of chemical milling maskant (less water for HAP; and less water and exempt solvents for VOC) (H_i and G_i); all data, calculations, and test results; monthly volumes of each maskant. [63.752(f)(1)]
2. For "averaged" maskants, monthly volume-weighted average mass of organic HAP or VOC emitted per unit volume of chemical milling maskant as applied (less water for HAP; and less water and exempt solvents for VOC) (H_a and G_a); all data, calculations, and test results. [63.752(f)(2)]

Controlled Maskants
3. For carbon adsorbers, overall control efficiency and length of rolling period and all supporting test results/data/calculations used in determining the overall control efficiency; certification of the accuracy of the device that measures the amount of HAP or VOC recovered.

[63.752(f)(3)]
4. For incinerators, overall control efficiency; test results, data, and calculations used in determining the overall control efficiency; length of rolling material balance period with data and calculations; record of certification of the accuracy of the device that measures amount of HAP or VOC recovered; or record of carbon replacement time for nonregenerative carbon adsorbers; and incinerator temperature(s). [63.752(f)(4)]

Reporting:

Semiannual (6 months from the date of notification of compliance status)
1. Exceedances of organic HAP/VOC limits. [63.753(e)(1) and (2)]
2. Control device exceedances (out of compliance). [63.753(e)(3)]
3. New maskants. [63.753(e)(4)]
4. New control devices. [63.753(e)(5)]
5. Statement certifying compliance. [63.753(e)(6)]

APPENDIX "B"

DISTRICT / SIP RULE COMPLIANCE DEMONSTRATIONS:

A. Rule 406: Owner/Operator shall not discharge into the atmosphere from this facility, from any single source of emissions whatsoever, Sulfur compounds, which would exist as a liquid or gas at standard conditions, calculated as sulfur dioxide (SO_2) greater than or equal to 500 ppm by volume.
[40 CFR 70.6 (a)(1) - Periodic Monitoring Requirements] (for Periodic Monitoring Requirements, see: Part II, section A, condition 22; Part III, section C, conditions 11 and 22; Part V, section C, condition 4; Part V, section D, condition 3; Part V, section I, condition 3)
[Rule 406 - *Specific Contaminants*; Version in SIP = 07/25/77, 40 CFR 52.220(c)(42)(xiii)(A) - 12/21/78 43 FR 52489, Subpart (a) only; Current Rule Version = 02/20/79]

Rule 406 specifies standard conditions, but not dry. Standard conditions for Rule 406 will be calculated as wet.

Calculate the SO_2 concentration in the diesel fueled IC engine exhaust gas using the following assumptions/calculations:

1. Maximum sulfur content of the diesel fuel is by permit condition: 0.05 % by weight.
2. Specific gravity of diesel fuel is 0.84: weight of one gallon of diesel fuel is: 8.33 lb/gal x 0.84 = 7 lb/gal.
3. Heating value of diesel fuel from U.S. EPA AP-42, Section 3.3: 19,300 Btu/lb.
4. Gallons of fuel required for 10^6 Btu: 1 lb/19,300 Btu = x lb/ 10^6 Btu: x = 51.8 lb: (51.8 lb)(1 gal/7 lb) = 7.4 gallons per 10^6 Btu.
5. Pounds of sulfur per 10^6 Btu (7.4 gallons): (7.4 gal)(7 lb/gal)(0.0005) = 0.0259 pounds.
6. Mols of sulfur per 10^6 Btu: 0.0259 lb/ 32 lb/mol = 8.09 x 10^{-4} mols.
7. Volume of SO_2 produced; assuming that one mol of sulfur produces one mol of SO_2; 8.09 x 10^{-4} mols of SO_2 are produced per 10^6 Btu of diesel burned: (385 ft^3 / mol)(8.09 x 10^{-4} mols) = 0.312 $ft^{3:}$ (385 ft^3/mol is at 68 degrees Fahrenheit).
8. From 40 CFR 60, Appendix A, Method 19 the F_w factor for diesel is 10,320 wscf / 10^6 Btu (68 degrees Fahrenheit, 0 % excess O_2). Rule 406 specifies the SO_2 concentration at standard conditions, wet, not dry.

For purposes of this calculation, excess air from the combustion process will not be considered in calculating the SO_2 concentration & is the most conservative assumption:
Concentration of SO_2 at zero percent oxygen:

$$0.312\ ft^3/(0.010320 \times 10^6\ wscf) = 30.2\ ppmv$$

Conclusion: Diesel fueled IC Engine exhaust SO_2 concentration of 30.2 ppmv complies with Rule 406 SO_2 limit of 500 ppmv.
It is assumed that the SO_2 concentration in natural gas fueled IC engine exhaust gas will be conservatively less than that demonstrated above for diesel combustion:

Calculate the CO concentration in boiler exhaust gas using the following assumptions/calculations:

1. Based on U.S. EPA AP-42; Section 1.4, Table 1.4-2, lists the CO emission factor for natural gas combustion in boilers to be 35 lb CO per 10^6 ft^3 of natural gas burned. Assume 1000 Btu / ft^3 of natural gas.
2. From 40 CFR 60 Appendix A, Method 19, the F_d factor for natural gas is 8710 dscf /10^6 Btu (68 degrees Fahrenheit). Rule 407 specifies the CO concentration on a dry basis.
3. For the purposes of this calculation, excess air will not be considered in calculating the CO concentration (most conservative):

   Cubic feet of CO produced per 10^6 ft^3 of natural gas burned:
   (35 lb) (1 lb mol / 28 lb) (385 ft^3 / mol) = 481 ft^3 CO (385 ft^3 / mol at 68 degrees Fahrenheit)

   Dry cubic feet of combustion gas formed from 10^6 ft^3 of natural gas burned:
   (10^6 ft^3 gas) (1000 Btu / ft^3) (8710 dscf / 10^6 Btu) = 8,710,000 dscf

   CO concentration = 481 ft^3 / 8.71 10^6 ft^3 = 55.2 ppm (most conservative)

   Conclusion: Boiler exhaust CO concentration of 55.2 ppmv complies with Rule 407 CO limit of 2000 ppmv.

B. Rule 409: Owner/Operator shall not discharge into the atmosphere from this facility from the burning of fuel, combustion contaminants exceeding 0.23 gram per cubic meter (0.1 grain per cubic foot) of gas calculated to 12 percent of carbon dioxide (CO_2) at standard conditions averaged over a minimum of 25 consecutive minutes.
[Rule 409 - *Combustion Contaminants*; Version in SIP = CARB Ex. Order G-73, 40 CFR 52.220(c)(39)(ii)(C) - 09/08/78 43 FR 40011; Current Rule Version = 07/25/77]

Calculate the Total Particulate Concentration in the diesel fueled IC engine exhaust gas using the following assumptions/calculations:

1. Based on U.S. EPA AP-42, Section 3.4, Table 3.4-5, the emission factor for total particulate is 0.0697 lb/10^6 Btu. (= 487.9 grains/10^6 Btu)
2. From 40 CFR 60, Appendix A, Method 19 the F_w factor for diesel is 10,320 wscf/10^6 Btu (68 degrees Fahrenheit, 0 % excess O_2). Rule 409 specifies the Particulate concentration at standard conditions, wet, not dry.

For purposes of this calculation, excess air from the combustion process will not be considered in calculating the Particulate concentration & is the most conservative assumption:

Concentration of Particulate at zero percent oxygen:

(487.9 grains/10^6 Btu) / (10,320 wscf/10^6 Btu) = 0.047 grain/ft^3

Conclusion: Diesel fueled IC Engine exhaust Total Particulate concentration of 0.047 grain per cubic foot complies with Rule 409 limit of 0.1 grain per cubic foot.

It is assumed that the Total Particulate concentration in natural gas fueled IC engine exhaust gas will be conservatively less than that demonstrated above for diesel combustion: